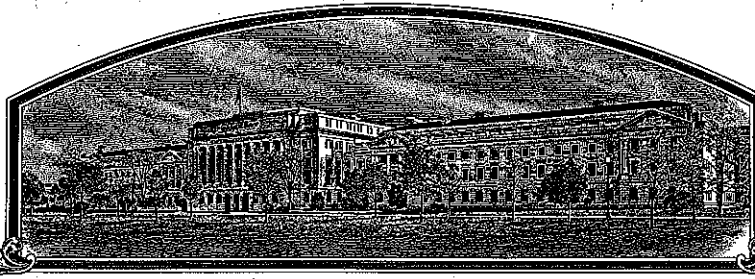


No.

200800037



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Agriculture and Agri-Food Canada

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REMISEMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR PROPAGATING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE FOREGOING PURPOSES, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

LETTUCE

'Estival'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this twenty-second day of January, in the year two thousand and nine.

Attest:

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Secretary of Agriculture

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE
(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

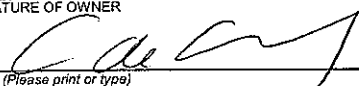
Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF OWNER Agriculture and Agri-Food Canada		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME (ESTIVAL) QSJ-03		3. VARIETY NAME ESTIVAL	
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country) 6000 C & E Trail Lacombe, Alberta T4L 1W1 Canada		5. TELEPHONE (include area code) (403) 782-8126		FOR OFFICIAL USE ONLY VPPO NUMBER #200800037 FILING DATE November 29, 07	
		6. FAX (include area code) (403) 782-6120			
7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.) Government		8. IF INCORPORATED, GIVE STATE OF INCORPORATION		9. DATE OF INCORPORATION	
10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. (First person listed will receive all papers) Ann De St. Remy 6000 C & E Trail Lacombe, Alberta T4L 1W1 Canada				FILING AND EXAMINATION FEES: \$4382 - DATE 11/29/2007 CERTIFICATION FEE: \$768.00 DATE 12/17/08	
11. TELEPHONE (Include area code) (403) 782-8126		12. FAX (Include area code) (403) 782- 6120		13. E-MAIL destremya@agr.gc.ca	
14. CROP KIND (Common Name) Crisp head lettuce		16. FAMILY NAME (Botanical) Compositae		18. DOES THE VARIETY CONTAIN ANY TRANSGENES? (OPTIONAL) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF SO, PLEASE GIVE THE ASSIGNED USDA-APHIS REFERENCE NUMBER FOR THE APPROVED PETITION TO DEREGULATE THE GENETICALLY MODIFIED PLANT FOR COMMERCIALIZATION.	
15. GENUS AND SPECIES NAME OF CROP Lactuca sativa L		17. IS THE VARIETY A FIRST GENERATION HYBRID? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			
19. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse)				20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD ONLY AS A CLASS OF CERTIFIED SEED? (See Section 83(a) of the Plant Variety Protection Act)	
a. <input checked="" type="checkbox"/> Exhibit A. Origin and Breeding History of the Variety b. <input checked="" type="checkbox"/> Exhibit B. Statement of Distinctness c. <input checked="" type="checkbox"/> Exhibit C. Objective Description of Variety d. <input type="checkbox"/> Exhibit D. Additional Description of the Variety (Optional) e. <input checked="" type="checkbox"/> Exhibit E. Statement of the Basis of the Owner's Ownership f. <input checked="" type="checkbox"/> Exhibit F. Declaration Regarding Deposit g. <input checked="" type="checkbox"/> Voucher Sample (3,000 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository) h. <input checked="" type="checkbox"/> Filing and Examination Fee (\$4,382), made payable to "Treasurer of the United States" (Mail to the Plant Variety Protection Office)				<input type="checkbox"/> YES (If "yes", answer items 21 and 22 below) <input checked="" type="checkbox"/> NO (If "no", go to item 23) <input type="checkbox"/> UNDECIDED	
				21. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES? <input type="checkbox"/> YES <input type="checkbox"/> NO IF YES, WHICH CLASSES? <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED	
				22. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? <input type="checkbox"/> YES <input type="checkbox"/> NO IF YES, SPECIFY THE NUMBER 1,2,3, etc. FOR EACH CLASS. <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED (If additional explanation is necessary, please use the space indicated on the reverse.)	
23. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OR OTHER COUNTRIES? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. (Please use space indicated on reverse.)				24. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT (PLANT BREEDER'S RIGHT OR PATENT)? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. (Please use space indicated on reverse.)	

25. The owners declare that a viable sample of basic seed of the variety has been furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate.

The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

Owner(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF OWNER 		SIGNATURE OF OWNER	
NAME (Please print or type) Ann de St Remy		NAME (Please print or type)	
CAPACITY OR TITLE Lead SP-West Office & Intellectual Property Commercialization	DATE Nov 15/07	CAPACITY OR TITLE	DATE

GENERAL INSTRUCTIONS: To be effectively filed with the Plant Variety Protection Office (PVPO), **ALL** of the following items must be **received** in the PVPO: (1) Completed application form signed by the owner; (2) completed exhibits A, B, C, E, F; (3) for a tuber reproduced variety, verification that a viable (*in the sense that it will reproduce an entire plant*) tissue culture will be deposited and maintained in an approved public repository; and (4) payment by credit card or check drawn on a U.S. bank for \$4,382 (\$518 filing fee and \$3,864 examination fee), payable to "Treasurer of the United States" (See Section 97.6 of the Regulations and Rules of Practice). **NEW:** With the application for a seed reproduced variety or by direct deposit soon after filing, the applicant must provide at least 3,000 viable untreated seeds of the variety *per se*, and for a hybrid variety at least 3,000 untreated seeds of each line necessary to **reproduce** the variety. Partial applications will be held in the PVPO for not more than 90 days; then returned to the applicant as un-filed. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 401, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. **DO NOT** use masking materials to make corrections. If a certificate is allowed, you will be requested to send a payment by credit card or check payable to "Treasurer of the United States" in the amount of \$768 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

NOTES: It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's representative during the life of the application/certificate. The fees for filing a change of address; owner's representative; ownership or assignment; or any modification of owner's name is specified in Section 97.175 of the regulations. (See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of the Regulations and Rules of Practice.)

Plant Variety Protection Office
Telephone: (301) 504-5518 FAX: (301) 504-5291
General E-mail: PVPOmail@usda.gov
Homepage: <http://www.ams.usda.gov/science/pvpo/PVPindex.htm>

SPECIFIC INSTRUCTIONS:

To avoid conflict with other variety names in use, the applicant must check the appropriate recognized authority and **provide evidence** that the permanent name of the application variety (even if it is a parental, inbred line) has been cleared by the appropriate recognized authority before the Certificate of Protection is issued. For example, for agricultural and vegetable crops, contact: U.S. Department of Agriculture, Agricultural Marketing Service, Livestock and Seed Programs, **Seed Regulatory and Testing Branch**, 801 Summit Crossing Place, Suite C, Gastonia, North Carolina 28054-2193 Telephone: (704) 810-8870. <http://www.ams.usda.gov/lsg/seed.htm>.

ITEM

- 19a. Give: (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method; (2) the details of subsequent stages of selection and multiplication; (3) evidence of uniformity and stability; and (4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified
- 19b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:
- (1) identify these varieties and state all differences objectively;
 - (2) attach replicated statistical data for characters expressed numerically and demonstrate that these are clear differences; and
 - (3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.
- 19c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.
- 19d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, etc.
- 19e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.
20. If "Yes" is specified (*seed of this variety be sold by variety name only, as a class of certified seed*), the applicant **MAY NOT** reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. (See Regulations and Rules of Practice, Section 97.103).
23. See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.
24. See Section 55 of the Act for instructions on claiming the benefit of an earlier filing date.

22. CONTINUED FROM FRONT (Please provide a statement as to the limitation and sequence of generations that may be certified.)

23. CONTINUED FROM FRONT (Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)

Estival has been sold for the first time in Canada in March 2007. The variety has never been sold in the U.S.

24. CONTINUED FROM FRONT (Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)

Estival is registered in Canada. A certificate # 2817 was issued by the Plant Breeder's Rights office on July 24, 2007.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 1.4 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or part of an individual's income is derived from any public assistance program (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD).

EXHIBIT A. ORIGIN AND BREEDING HISTORY OF THE VARIETY

Estival was developed from a cross between Valleygreen (female) and Ithaca (male) followed by single plant selection using the pedigree method. The original cross, designated as X300, was made in October 1998 in the greenhouses of the Horticultural Research and Development Centre in Saint-Jean-sur-Richelieu, Quebec, Canada. F1 seeds of X300 were planted in the greenhouses in December 1998 and F2 seeds collected and bulk massed in June 1999.

F2 seedlings of X300-M were planted in the field at the Sainte-Clotilde experimental station of Agriculture and Agri-Food Canada for evaluation during the summer of 2000. Four F2 plants were selected for good Vanguard character combined with good size, flatness of butt, low ribbiness, good color and lack of rib discoloration symptoms. In the fall of 2000, 306 F3 seeds were collected from the one (selection #186) of the two selections which regenerated through the *in vitro* process.

F3 seedlings of X300-M-186 were planted on a muck soil farm the Sainte-Clotilde experimental station of Agriculture and Agri-Food Canada in the spring of 2001. Mature plants were evaluated and six plants were selected for their short core, good color, size and weight, and excellent leaf configuration. Six selections were regenerated from *in vitro* culture and among them selection # 1071 produced 368 F4 seeds.

F4 seedlings of X300-M-186-1071 were transplanted and evaluated at four planting-sites (the Sainte-Clotilde experimental station and a muck soil farm in Napierville) during the summer of 2002. On the 18 selections collected, 15 were successfully regenerated through *in vitro* culture. Among them, selection # 457 produced 1900 F5 seeds.

In 2003, F5 seedlings of X300-M-186-1071-457 were transplanted and evaluated at four planting-sites (the Sainte-Clotilde experimental station and a muck soil farm in Napierville). Seventeen selections were collected and ten survived.

In 2004, single plant selection continued on F6 plants evaluated four planting sites in Sainte-Clotilde and Napierville. During the same year, F6 seeds were planted in single plants progeny rows in the San Joaquin Valley in April for a seed evaluation and multiplication trial. Ten single plants were selected and F7 seeds collected from individual plants, the rest of the plants being bulk-massed after harvested in September 2004. The decision was made in March 2005 to consider X300-M-186-1071-457 as a potential new variety first designated as QSJ-03. It was then named Estival in August 2006.

STATEMENT OF UNIFORMITY AND STABILITY

Estival has been reproduced and judged stable for the past 2 generations. Estival is uniform for all traits as described in Exhibit C. ~~Estival shows no variants other than what would normally be expected due to the environment.~~

RAP 10/21/08
were observed.

EXHIBIT B. STATEMENT OF DISTINCTNESS

Estival is a crisphead lettuce with a head configuration and leaf color resembling most Summertime. Estival has shallower, less dense incisions on the apical margin of the leaf blade than Summertime. At harvest maturity, Estival has a shorter stem than Summertime. When cultivated during hot summer growing conditions, the leaves from the head of Estival are more resistant to rib discoloration than those of Summertime. Estival and Summertime are Vanguard type, whereas Ithaca, the standard regional check variety, is a Eastern type.

Evidence in support of variety distinctness:

Estival is most similar with the variety Summertime; However, at optimal marketable maturity, Estival lettuce heads have a shorter stem and less rib discoloration symptoms.

Plots were 14.6 m long and contained 80 plants arranged in a completely randomized bloc design (total of 320 plants per variety). Plots consisted of 2 rows of lettuce plants on bed of 0.91 m wide. Within and between plant spacing was 0.36 m. Lettuce heads were evaluated at optimal maturity of each variety during the warmest period of the growing season (i.e. the last two weeks of July). Plants were grown under standard growing conditions under long photoperiods of 15 to 16 hours. Measurements were made on 4 times 12, i.e. 48 plants. A t-test was performed on the data, and probability values (p-value) were reported, along with the average value for each variety with the standard error in parenthesis.

Trial 1:

Location: Farm JPL Guérin, Sherrington, Quebec, Canada

Sowing: 09-05-2005

Planting: 01-06-2005

Harvest: 15-07-2005

Variety	Estival	Summertime	p-value
Stem length (cm)	51.7 (\pm 3.9)	63.1 (\pm 2.9)	0.003
Rib discoloration incidence (% plants)	12.5 (\pm 8.3)	37.5 (\pm 10.8)	0.01

Trial 2:

Location: Farm JPL Guérin, Sherrington, Quebec, Canada

Sowing: 08-05-2006

Planting: 02-06-2006

Harvest: 17-07-2006 (Summertime) and 18-07-2006 (Estival)

Variety	Estival	Summertime	p-value
Stem length (cm)	43.7 (\pm 2.0)	56.0 (\pm 4.9)	0.015
Rib discoloration incidence (% plants)	5.9 (\pm 5.9)	35.3 (\pm 5.9)	0.004

The mature leaves of 'Estival' have shallower incisions (moderate vs deep depth) than 'Summertime'.

ADDED
RAO 10/21/08

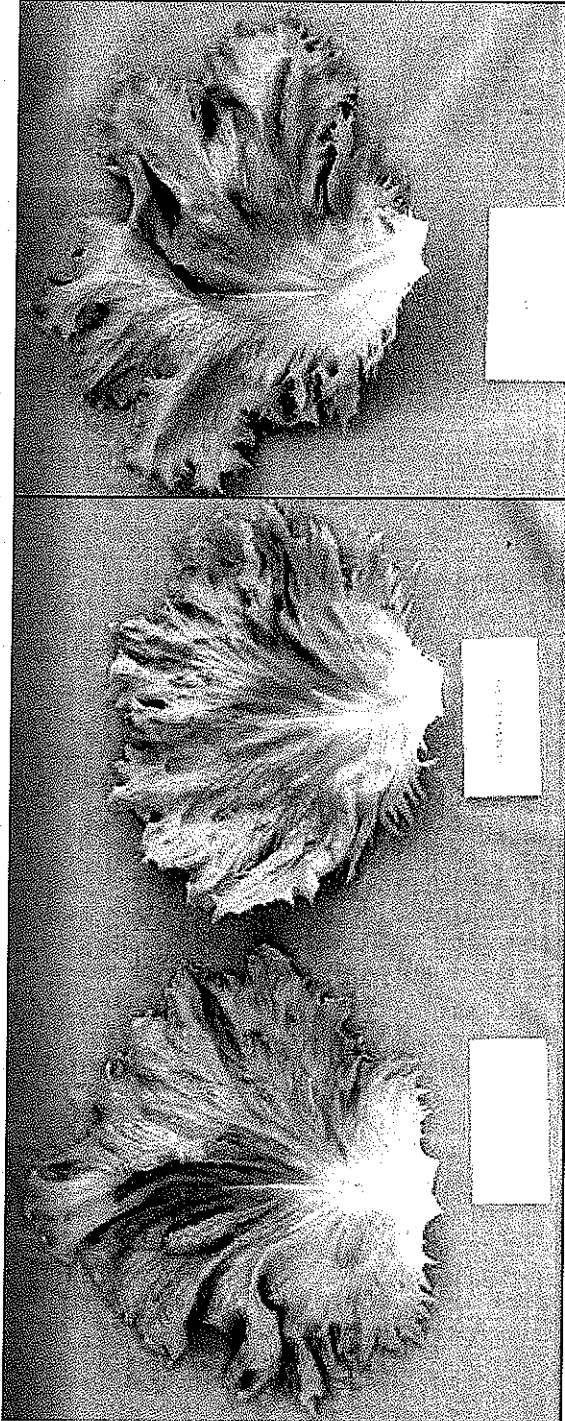


Figure 2. Harvest-mature leaf of Estival (QSJ-03), Summertime and Ithaca

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 1.4 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, sexual orientation, marital or family status, political beliefs, parental status, or protected genetic information. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call 202-720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

**U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MD 20705**

Exhibit C

**OBJECTIVE DESCRIPTION OF VARIETY
Lettuce (*Lactuca sativa* L.)**

NAME OF APPLICANT (S) Agriculture & Agri-Food Canada	TEMPORARY OR EXPERIMENTAL DESIGNATION QJSJ-03	VARIETY NAME ESTIVAL
ADDRESS (Street and No. or RD No., City, State, Zip Code, and Country) 6000 C & E Trail Lacombe, Alberta T4L 1W1 CANADA		FOR OFFICIAL USE ONLY PVPO NUMBER #200800037

Place the appropriate number that describes the varietal character in the boxes below. Place a zero in the first box (e.g. or) when number is either 99 or less or 9 or less. Measured data should be the mean of an appropriate number (at least 20) of well space plants. Royal Horticultural Society or any recognized color standard may be used to determine plant colors.

The Location of the Test Area is: Sherrington, Quebec, Canada

Color System Used:

SPECIFIC VARIETIES USED FOR COMPARISON AS CHECK VARIETIES IN THIS APPLICATION: Use standard regional check varieties, which are adapted to your area. One of the comparison varieties must be the most similar variety used in Exhibit B.

Application Variety (a1) ESTIVAL (QJSJ-03) Most Similar Variety (c1) Summertime

Standard Regional Check Variety (c2) ITHACA

1. PLANT TYPE: (See List of Suggested Check Varieties on Page 8)

01 = Cutting/Leaf	04 = Cos or Romaine	07 = Salinas Group	10 = Latin
02 = Butterhead	05 = Great Lakes Group	08 = Eastern (Ithaca) Group	11 = Other (Specify) _____
03 = Bibb	06 = Vanguard Group	09 = Stem	

(a1) (c1) (c2)

2. SEED:

(a1) <input type="text" value="2"/>	} COLOR 1 = White (Silver Gray) 2 = Black (Grey Brown) 3 = Brown (Amber)	(a1) <input type="text" value="1"/>	} LIGHT DORMANCY 1 = Light Required 2 = Light Not Required	(a1) <input type="text" value="1"/>	} HEAT DORMANCY 1 = Susceptible 2 = Not Susceptible
(c1) <input type="text" value="2"/>		(c1) <input type="text" value="1"/>		(c1) <input type="text" value="1"/>	
(c2) <input type="text" value="2"/>		(c2) <input type="text" value="1"/>		(c2) <input type="text" value="1"/>	

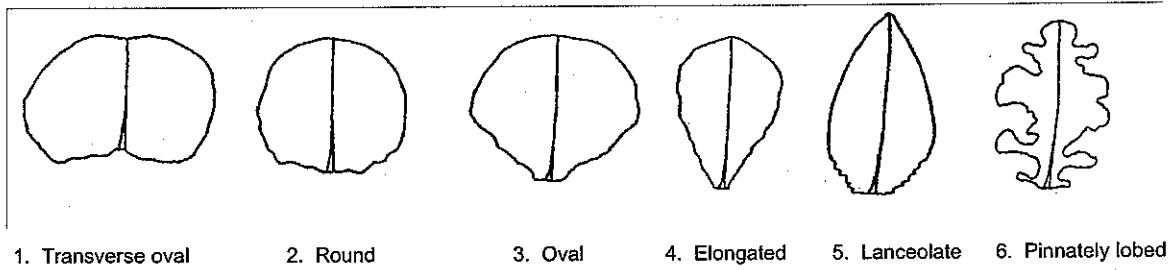
3. COTYLEDON TO FOURTH LEAF STAGE: NOTE: Provide a color photograph or photocopy of the fourth leaf from 20 day-old seedling grown under optimal conditions.

SHAPE OF COTYLEDONS: 1 = Broad 2 = Intermediate 3 = Spatulate

(a1) (c1) (c2)

SHAPE OF FOURTH LEAF: (a1) (c1) (c2)

3. COTYLEDON TO FOURTH LEAF STAGE: (continued)



LENGTH/WIDTH INDEX OF FOURTH LEAF: L/W x 10

(a1) 14(c1) 20(c2) 15

APICAL MARGIN:

1 = Entire
2 = Crenate/Gnawed
3 = Finely Dentate

4 = Moderately Dentate
5 = Coarsely Dentate
6 = Incised

7 = Lobed
8 = Other (Specify) _____

(a1) 3(c1) 3(c2) 5

BASAL MARGIN: (Use the options for Apical Margin above)

(a1) 5(c1) 5(c2) 3

UNDULATION:

1 = Flat

2 = Slight

3 = Medium

4 = Marked

(a1) 1(c1) 1(c2) 2

GREEN COLOR:

1 = Yellow Green
2 = Light Green

3 = Medium Green
4 = Dark Green

5 = Blue Green
6 = Silver Green

7 = Grey Green

(a1) 3(c1) 3(c2) 3

ANTHOCYANIN:

DISTRIBUTION:

1 = Absent
2 = Margin Only

3 = Spotted
4 = Throughout

5 = Other (Specify) _____

(a1) 1(c1) 1(c2) 1

CONCENTRATION:

1 = Light

2 = Moderate

3 = Intense

(a1) -(c1) -(c2) -

ROLLING:

1 = Absent

2 = Present

(a1) 2(c1) 2(c2) 2

CUPPING:

1 = Uncupped

2 = Slight

3 = Markedly

(a1) 1(c1) 1(c2) 2

REFLEXING:

1 = None

2 = Apical Margin

3 = Lateral Margins

(a1) 3(c1) 3(c2) 2

4. MATURE LEAVES (Observe Harvest-Mature Outer Leaves)

NOTE: Provide color photo of a harvest-mature leaf which accurately shows color and margin characteristics.

MARGIN:**INCISION DEPTH:**
(deepest penetration
of the margin)

1 = Absent/Shallow (Dark Green Boston)

2 = Moderate (Vanguard)

3 = Deep (Great Lakes 659)

(a1)

(c1)

(c2)

INDENTATION: (Finest divisions of the margin)

1 = Entire (Dark Green Boston)

4 = Crenate (Vanguard)

2 = Shallowly Dentate (Great Lakes 65)

5 = Other (Specify) _____

3 = Deeply Dentate (Great Lakes 659)

(a1)

(c1)

(c2)

**UNDULATIONS OF THE
APICAL MARGIN:**

1 = Absent/Slight (Dark Green Boston) 2 = Moderate (Vanguard)

3 = Strong (Great Lakes 659)

(a1)

(c1)

(c2)

GREEN COLOR:

1 = Very Light Green (Bibb)

3 = Medium Green (Great Lakes)

5 = Very Dark Green

2 = Light Green (Minetto)

4 = Dark Green (Vanguard)

6 = Other (Specify) _____

(a1)

(c1)

(c2)

ANTHOCYANIN:**DISTRIBUTION:**

1 = Absent

3 = Spotted (California Cream Butter)

5 = Other (Specify) _____

2 = Margin Only (Big Boston)

4 = Throughout (Prize Head)

(a1)

(c1)

(c2)

CONCENTRATION:

1 = Light (Iceberg)

2 = Moderate (Prize Head)

3 = Intense (Ruby)

(a1)

(c1)

(c2)

SIZE:

1 = Small

2 = Medium

3 = Large

(a1)

(c1)

(c2)

GLOSSINESS:

1 = Dull (Vanguard)

2 = Moderate (Salinas)

3 = Glossy (Great Lakes)

(a1)

(c1)

(c2)

BLISTERING:1 = Absent/Slight
(Salinas)2 = Moderate
(Vanguard)3 = Strong
(Prize Head)

(a1)

(c1)

(c2)

LEAF THICKNESS:

1 = Thin

2 = Intermediate

3 = Thick

(a1)

(c1)

(c2)

TRICHOMES:

1 = Absent (Smooth)

2 = Present (Spiny)

(a1)

(c1)

(c2)

5. PLANT:**SPREAD OF FRAME LEAVES:**

(a1)

cm

(c1)

cm

(c2)

cm

5. PLANT: (continued)

HEAD DIAMETER: (Market Trimmed with Single Cap Leaf)

(a1) 15 cm

(c1) 15 cm

(c2) 14 cm

HEAD SHAPE:

1 = Flattened
2 = Slightly Flattened3 = Spherical
4 = Elongate

5 = Non-Heading

6 = Other (Specify) _____

(a1) 3

(c1) 3

(c2) 3

HEAD SIZE CLASS:

1 = Small

2 = Medium

3 = Large

(a1) 3

(c1) 3

(c2) 3

HEAD PER CARTON:

(a1)

(c1)

(c2)

HEAD WEIGHT:

(a1) 0688 g.

(c1) 0748 g.

(c2) 0677 g.

HEAD FIRMNESS:

1 = Loose

2 = Moderate

3 = Firm

4 = Very Firm

(a1) 4

(c1) 4

(c2) 4

6. BUTT:

SHAPE:

1 = Slightly Concave

2 = Flat

3 = Rounded

(a1) 2

(c1) 2

(c2) 3

MIDRIB:

1 = Flattened (Salinas)

2 = Moderately Raised

3 = Prominently Raised (Great Lakes 659)

(a1) 1

(c1) 2

(c2) 3

7. CORE:

DIAMETER AT BASE OF HEAD:

(a1) 32 mm

(c1) 34 mm

(c2) 34 mm

RATIO OF HEAD DIAMETER/CORE DIAMETER:

(a1) 04.4

(c1) 04.1

(c2) 04.2

CORE HEIGHT FROM BASE OF HEAD TO APEX:

(a1) 43 mm

(c1) 56 mm

(c2) 47 mm

8. BOLTING: (Give First Water Date: _____) NOTE: First Water Date is the date seed first receives adequate moisture to germinate. This can and often does equal the planting date.

SEEDING DATE IN THE GREEN HOUSE: 19/04/2006; WATERING AT TRANSPLANTING: 25/05/2006
NUMBER OF DAYS FROM FIRST WATER DATE TO SEED STALK EMERGENCE: (summer conditions) FROM TRANSPLANTING:

(a1) 062

(c1) 050

(c2) 049

BOLTING CLASS:

1 = Very Slow
2 = Slow3 = Medium
4 = Rapid

5 = Very Rapid

(a1) 1

(c1) 2

(c2) 2

HEIGHT OF MATURE SEED STALK:

109

112

129

(a1) cm (c1) cm (c2) cm

8. BOLTING: (continued)

SPREAD OF BOLTER PLANT: (At widest point)

(a1) cm (c1) cm (c2) cm

BOLTER LEAVES: 1 = Straight 2 = Curved

(a1) (c1) (c2)

MARGIN: 1 = Entire 2 = Dentate

(a1) (c1) (c2)

COLOR: 1 = Light Green 2 = Medium Green 3 = Dark Green

(a1) (c1) (c2)

BOLTER HABIT:

TERMINAL INFLORESCENCE: 1 = Absent 2 = Present

(a1) (c1) (c2)

LATERAL SHOOTS: 1 = Absent 2 = Present

(a1) (c1) (c2)

BASAL SIDE SHOOTS: 1 = Absent 2 = Present

(a1) (c1) (c2)

9. MATURITY: (earliness of harvest-mature head formation)

NOTE: Complete this section for at least one season.

SEASON	APPLICATION VARIETY No. of Days ¹			MOST SIMILAR VARIETY No. of Days ¹			STANDARD REGIONAL CHECK VARIETY No. of Days ¹		
Spring									
Summer	44	46		44	46		43	40	
Fall									
Winter									

¹ First Water Date to Harvest

Give Planting Date(s) and Location(s): at SHERRINGTON, QUEBEC, CANADA

Spring: _____

Summer: Seeding dates: 09/05/2005 and 08/05/2006; Transplanting dates: 01/06/2005 and 02/06/2006

Fall: _____

Winter: _____

10. ADAPTATION:

PRIMARY REGIONS OF ADAPTATION (tested and proven adapted):

0 = Not Tested 1 = Not Adapted 2 = Adapted

☐ Southwest (CA and/or AZ desert)
 ☐ West Coast
 ☐ Northeast

☒ North Central - SUMMER & FALL
 ☒ Southeast - WINTER & SPRING
 ☒ Other (Specify) LONG DAYS AND HOT WEATHER CONDITIONS

10. ADAPTATION: (Continued)

SEASON:

RAO 7/25/08

<input type="checkbox"/>	Spring	(Area <u>SOUTHEAST</u>)	<input checked="" type="checkbox"/>	Fall	(Area <u>NORTHEAST, NORTH CENTRAL</u>)
<input checked="" type="checkbox"/>	Summer	(Area <u>NORTHEAST, NORTH CENTRAL</u>)	<input type="checkbox"/>	Winter	(Area <u>SOUTHEAST</u>)

☐ GREENHOUSE: 0 = Not Tested 1 = Not Adapted 2 = Adapted

☒ SOIL TYPE: 1 = Mineral 2 = Organic 3 = Both

11. VIRAL DISEASES:

1 = Immune	3 = Resistant	5 = Moderately Resistant/Moderately Susceptible	7 = Susceptible	9 = Highly Susceptible
Big Vein	(a1)	<input type="checkbox"/>	(c1)	<input type="checkbox"/>
Lettuce Mosaic	(a1)	<input checked="" type="checkbox"/>	(c1)	<input type="checkbox"/>
Cucumber Mosaic	(a1)	<input type="checkbox"/>	(c1)	<input type="checkbox"/>
Tomato Bushy Stunt, cause of dieback	(a1)	<input type="checkbox"/>	(c1)	<input type="checkbox"/>
Turnip Mosaic	(a1)	<input type="checkbox"/>	(c1)	<input type="checkbox"/>
Beet Western Yellows	(a1)	<input type="checkbox"/>	(c1)	<input type="checkbox"/>
Lettuce Infectious Yellows	(a1)	<input type="checkbox"/>	(c1)	<input type="checkbox"/>
Other (Specify) _____	(a1)	<input type="checkbox"/>	(c1)	<input type="checkbox"/>

12. FUNGAL/BACTERIAL DISEASES:

1 = Immune	3 = Resistant	5 = Moderately Resistant/Moderately Susceptible	7 = Susceptible	9 = Highly Susceptible
Corky Root Rot (Races: _____)	(a1)	<input type="checkbox"/>	(c1)	<input type="checkbox"/>
Downy Mildew (Races: _____)	(a1)	<input checked="" type="checkbox"/>	(c1)	<input type="checkbox"/>
Powdery Mildew	(a1)	<input type="checkbox"/>	(c1)	<input type="checkbox"/>
Sclerotinia Drop	(a1)	<input type="checkbox"/>	(c1)	<input type="checkbox"/>
Bacterial Soft Rot (Pseudomonas spp. and others)	(a1)	<input type="checkbox"/>	(c1)	<input type="checkbox"/>
Botrytis (Grey Mold)	(a1)	<input type="checkbox"/>	(c1)	<input type="checkbox"/>
Verticillium Wilt	(a1)	<input type="checkbox"/>	(c1)	<input type="checkbox"/>
Bacterial Leaf Spot	(a1)	<input type="checkbox"/>	(c1)	<input type="checkbox"/>
Anthracoise	(a1)	<input type="checkbox"/>	(c1)	<input type="checkbox"/>
Other (Specify) _____	(a1)	<input type="checkbox"/>	(c1)	<input type="checkbox"/>

RAO 7/25/08

CA III isolate
Dm10 m47
gene

13. INSECTS:

1 = Immune	3 = Resistant	5 = Moderately Resistant/Moderately Susceptible	7 = Susceptible	9 = Highly Susceptible
Cabbage Loopers	(a1)	<input type="checkbox"/>	(c1)	<input type="checkbox"/>
Root Aphids	(a1)	<input type="checkbox"/>	(c1)	<input type="checkbox"/>
Green Peach Aphid	(a1)	<input type="checkbox"/>	(c1)	<input type="checkbox"/>
Lettuce Aphid	(a1)	<input type="checkbox"/>	(c1)	<input type="checkbox"/>

Pea Leafminer	(a1)	<input type="text"/>	(c1)	<input type="text"/>	(c2)	<input type="text"/>
Other (Specify) _____	(a1)	<input type="text"/>	(c1)	<input type="text"/>	(c2)	<input type="text"/>

14. PHYSIOLOGICAL STRESSES:

	1 = Immune	3 = Resistant	5 = Moderately Resistant/Moderately Susceptible	7 = Susceptible	9 = Highly Susceptible
Tipburn		(a1) <input type="text" value="3"/>	(c1) <input type="text" value="3"/>	(c2) <input type="text" value="5"/>	
Heat		(a1) <input type="text" value="3"/>	(c1) <input type="text" value="5"/>	(c2) <input type="text" value="6"/>	
Drought		(a1) <input type="text"/>	(c1) <input type="text"/>	(c2) <input type="text"/>	
Cold		(a1) <input type="text"/>	(c1) <input type="text"/>	(c2) <input type="text"/>	
Salt		(a1) <input type="text"/>	(c1) <input type="text"/>	(c2) <input type="text"/>	
Brown Rib (Rib Discoloration, Rib Blight)		(a1) <input type="text" value="3"/>	(c1) <input type="text" value="7"/>	(c2) <input type="text" value="7"/>	
Other (Specify) <u>BOLTING</u>		(a1) <input type="text" value="3"/>	(c1) <input type="text" value="7"/>	(c2) <input type="text" value="5"/>	

15. POST HARVEST STRESS:

	1 = Immune	3 = Resistant	5 = Moderately Resistant/Moderately Susceptible	7 = Susceptible	9 = Highly Susceptible
Pink Rib		(a1) <input type="text"/>	(c1) <input type="text"/>	(c2) <input type="text"/>	
Russet Spotting		(a1) <input type="text"/>	(c1) <input type="text"/>	(c2) <input type="text"/>	
Rusty Brown Discoloration		(a1) <input type="text"/>	(c1) <input type="text"/>	(c2) <input type="text"/>	
Internal Rib Necrosis (Blackheart, Grey Rib, Grey Streak)		(a1) <input type="text"/>	(c1) <input type="text"/>	(c2) <input type="text"/>	
Brown Stain		(a1) <input type="text"/>	(c1) <input type="text"/>	(c2) <input type="text"/>	

16. BIOCHEMICAL OR ELECTROPHORETIC MARKERS:

17. COMMENTS:

SUGGESTED CHECK VARIETIES

<u>TYPE</u>	<u>CHECK VARIETY</u>
1 Cutting/Leaf	Waldmann's Green
2 Butterhead	Dark Green Boston
3 Bibb	Bibb
4 Cos or Romain	Parris Island
5 Great Lakes Group	Great Lakes 659-700
6 Vanguard Group	Vanguard
7 Salinas Group	Salinas
8 Eastern Group	Ithaca
9 Stem	Celltuce
10 Latin	Little Gem

REFERENCES

- Bowring, J.D.C., 1969, "The Identification of Varieties of Lettuce (*Lactuca Sativa* L.)". Journal of the National Institute of Agricultural Botany 11:499-520. National Institute of Agricultural Botany, Cambridge, UK.
- Davis, R.M., K.V. Subbarao, R.N. Raid, and E.A. Kurtz, 1997. "Compendium of Lettuce Diseases". APS Press, St. Paul, MN.
- Michelmore, R.W., J. M. Norwood, D.S. Ingram, I.R. Crute and P. Nicholson. 1984. "The inheritance of virulence in *Bremia lactucae* to match resistance factors 3, 4, 5, 6, 8, 9, 10, and 11 in lettuce (*Lactuca sativa*)". Plant Pathology 32:176-177.
- Norwood, J.M., R.W. Michelmore, I.R. Crute and D.S. Ingram. 1983. "The inheritance of specific virulence of *Bremia lactucae* (Downy Mildew) to match R-factors 1, 2, 4, 6, and 11 in lettuce (*Lactuca sativa*)". Plant Pathology 32:176-177.
- Rodenburg, C.M., et al., 1960. "Varieties of Lettuce. An International Monograph", Instituut voor de Verdeling van Tuinbouwgewassen (IVT), Wageningen, NL.
- Ryder, E.J., 1999, *Lettuce, Endive, and Chicory*, CABI Publications, Wallingford, UK.

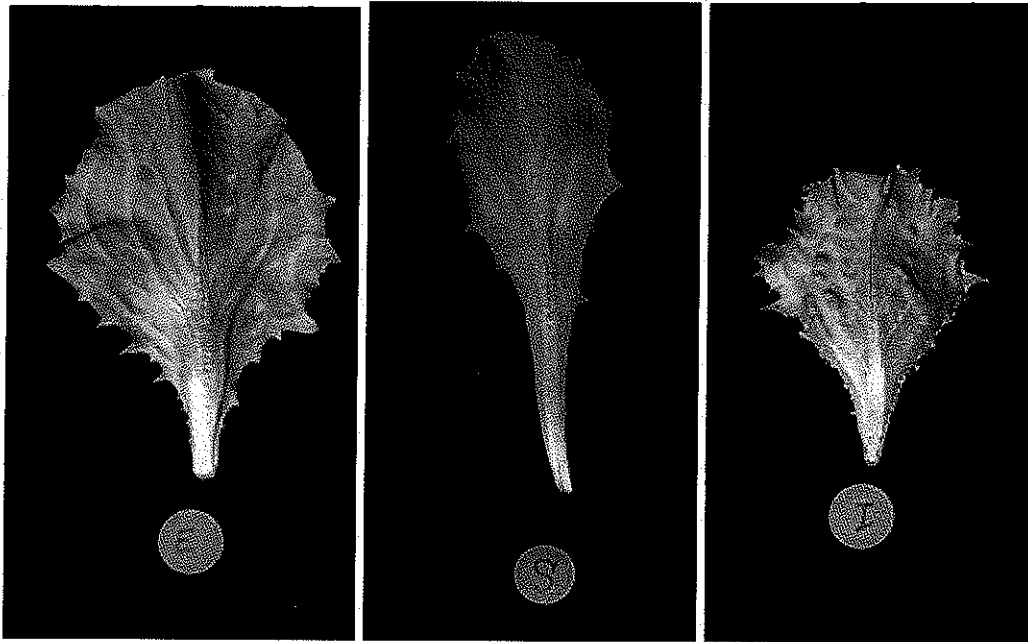


Figure 2. The fourth leaf of a 20 day-old seedling of Estival (E), Summertime (S) and Ithaca (I)



Figure 1. Twenty day-old seedlings of Estival, Summertime and Ithaca

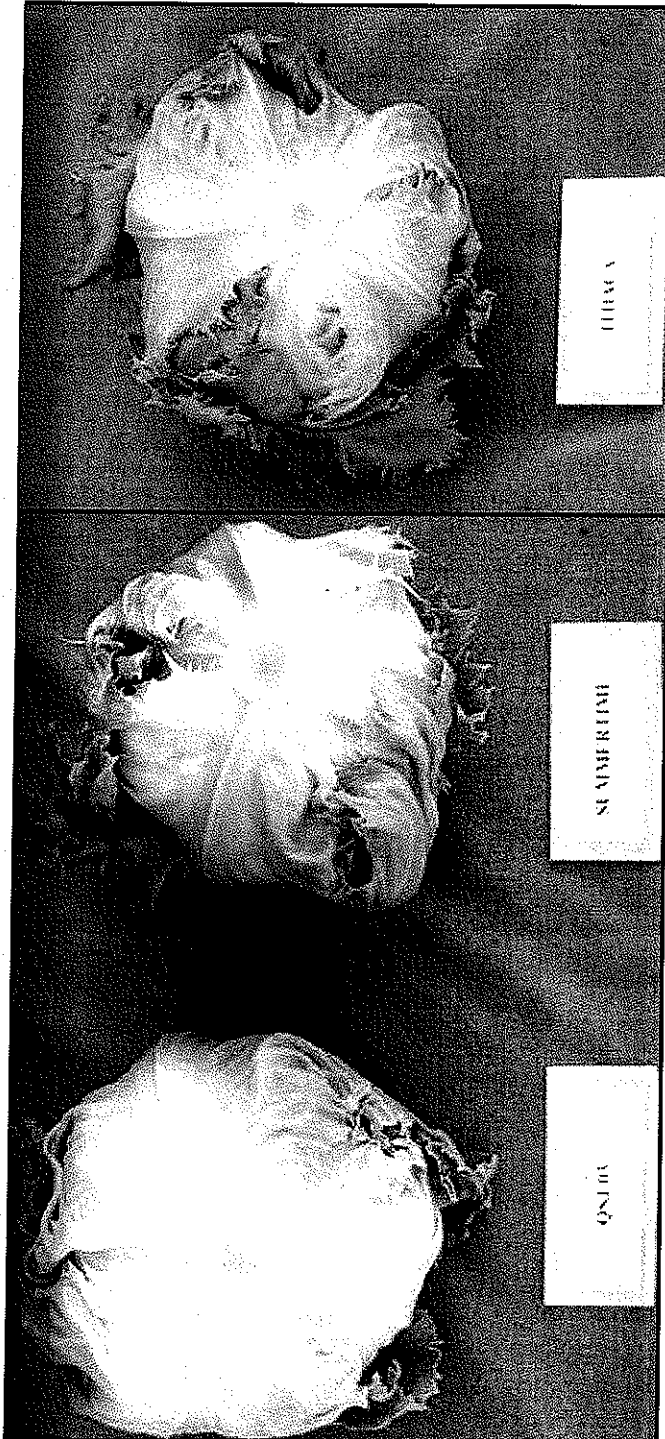


Figure 3. Butt of Estival (QSJ-03), Summertime and Ithaca

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). The information is held confidential until the certificate is issued (7 U.S.C. 2426).

EXHIBIT E
STATEMENT OF THE BASIS OF OWNERSHIP

1. NAME OF APPLICANT(S) Agriculture and Agri-Food Canada	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER QSI-03	3. VARIETY NAME ESTIVAL
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP, and Country) 6000 C & E Trail Lacombe, Alberta T4L 1W1 Canada	5. TELEPHONE (Include area code) (403) 782-8126	6. FAX (Include area code) (403) 782-6120
7. PVPO NUMBER #200800037		

8. Does the applicant own all rights to the variety? Mark an "X" in the appropriate block. If no, please explain. ☒ YES ☐ NO

9. Is the applicant (individual or company) a U.S. national or a U.S. based company? If no, give name of country. ☐ YES ☒ NO

CANADA

10. Is the applicant the original owner? ☒ YES ☐ NO If no, please answer one of the following:

a. If the original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. National(s)?

☐ YES ☐ NO If no, give name of country

CANADA

b. If the original rights to variety were owned by a company(ies), is (are) the original owner(s) a U.S. based company?

☐ YES ☐ NO If no, give name of country

CANADA

11. Additional explanation on ownership (Trace ownership from original breeder to current owner. Use the reverse for extra space if needed):

Dr. Sylvia Jenni, the breeder of this lettuce, was in the employ of Agriculture and Agri-Food Canada when the cross was made and has been employed by Agriculture and Agri-Food Canada continuously since then. As a Crown employee, as per Section 3 of the Public Servants Inventions Act P-32 of Canada all inventions made by public servants acting within the scope of their duties belong to Her Majesty the Queen in Right of Canada. Management of inventions owned by the Crown is delegated to government departments and to individuals who have been authorized to sign on behalf of the Crown.

PLEASE NOTE:

Plant variety protection can only be afforded to the owners (not licensees) who meet the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed the final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definitions.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 0.1 hour per response, including the time for reviewing the instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, sexual orientation, marital or family status, political beliefs, parental status, or protected genetic information. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, D.C. 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 5 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, sexual orientation, marital or family status, political beliefs, parental status, or protected genetic information. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call 202-720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MD 20705

EXHIBIT F
DECLARATION REGARDING DEPOSIT

NAME OF OWNER (S) Agriculture and Agri-Food Canada	ADDRESS (Street and No. or RD No., City, State, and Zip Code and Country) 6000 C & E Trail Lacombe, Alberta T4L 1W1 Canada	TEMPORARY OR EXPERIMENTAL DESIGNATION QJ-03
NAME OF OWNER REPRESENTATIVE (S) Ann De St. Remy	ADDRESS (Street and No. or RD No., City, State, and Zip Code and Country) 6000 C & E Trail Lacombe, Alberta T4L 1W1 Canada	VARIETY NAME ESTIVAL
		FOR OFFICIAL USE ONLY
		PVPO NUMBER #200800037

I do hereby declare that during the life of the certificate a viable sample of propagating material of the subject variety will be deposited, and replenished as needed periodically, in a public repository in the United States in accordance with the regulations established by the Plant Variety Protection Office.

Breeder: Dr. Sylvie Jenni
Contact Info: 430 Gouin Blvd
Saint-Jean-Sur-Richelieu, Quebec
J3B 3E6
Canada
Phone (450) 515-2055
Fax (450) 346-7740

Signature

Date

Nov 15/07

18